

ABSTRACT OF THE DISCLOSURE

A filter for removing soot from the exhaust gases from a diesel engine. The filter incorporates two elements. The first element is a flow-through filter element
5 incorporating a porous metal substrate formed by electrodepositing a metal such as nickel in the interstitial spaces of a packed array of electrically nonconductive particles of a material and then removing the material of the particles to produce the porous metal substrate. The second
10 element is a hollow body having an inlet port and an outlet port, the filter element being positioned in and sealed to the hollow body so that diesel exhaust gases directed into the inlet port of the hollow body flow through the porous metal substrate from the inlet side of the porous metal substrate to
15 the outlet side of the porous metal substrate and then out the outlet port of the hollow body. The bulk density of the porous metal substrate is less than 40% of the density of the metal of the substrate. The average pore diameter of the pores at the inlet side of the porous metal substrate is greater than one
20 micrometer. The area of the pores of the inlet side of the porous metal substrate is greater than about 35% the area of the inlet side of the porous metal substrate.